

Mattole Restoration Council Petrolia Site Handbook



P.O. Box 160 • Petrolia, CA 95558 (707) 629-3514 Fax: (707) 629-3577 mrc@mattole.org



Watershed Stewards Project Mission

The mission of the AmeriCorps Watershed Stewards Project is to conserve, restore, and enhance anadromous watersheds for future generations by linking education with high quality scientific practices.



Sockeye Salmon

Service Year 18 – 2011/12



Table of Contents

Introduction	4
Site Description	4
General Calendar of Duties at MRC	5
Description of Site Duties	7
ISPs and Outreach Events	8
ISP Information	8
Outreach Information	8
Calendar of Outreach Events for Site / Community	9
Education	9
Education Notes	9
Site / Region Specific Education Resources	9
Local Ecology	10
Descriptions of Local Ecology	10
Housing and Local Resources	12
Housing Contact List	12
Local Resource Contacts	12
Community Information	13
Map of Area	13
Community Demographics	14
Community Services	14
Entertainment and Community Events	14
Resources for Affordable Entertainment Options	14
Recurring Event List	14
Helpful Hints	15
Attachments	15
Contact Lists	15
Ed Logs & Information	15
Ed Tally Sheet	17
Outreach Summaries & Information	18
Site Protocols & Information	18
Site Forms	18

Service Year 18 - 2011/12

Introduction

Site Description

Location Petrolia, CA

Agency Mattole Restoration Council (MRC)
Affiliation

The MRC is an organization focused on assisting the natural recovery of ecosystems within the Mattole River watershed towards a higher level of diversity and resilience. More information pertaining to the vision, mission statement, history, and current personnel can be found at http://www.mattole.org/content/about-mrc. This year is the

28th anniversary of the MRC.

General Ecology The Mattole River watershed is located in Humboldt and Mendocino counties in northern California. The watershed boasts some of the most extreme rainfall, seismic activity, and rugged landscapes in the country. From its beginnings as springs in Mendocino County, the river runs in a northwesterly direction, emptying into the Pacific Ocean at the north end of California's Lost Coast.

The mountainous King Range separates the watershed from the Pacific Ocean. The coast here is so rugged that builders of the Coastal Highway were forced to go inland. Because of the lack of a main thoroughfare, the watershed was spared intense development and remains a somewhat isolated paradise. Currently, the watershed has a population of approximately 2,500 people, with most centered in the communities of Petrolia, Honeydew, Ettersburg, and Whitethorn.

The Mattole landscape is a mix of forest and open grassland, punctuated by creeks and the river. The Mattole River is home to one of the last runs of salmon that is unaltered by the introduction of non-native hatchery fish in California.





General Calendar of Duties at MRC

Month	Location	Site Duties	Work Load	Typical Work Hours
Winter				
December	Field/Office	Nursery Work, Riparian Planting, Turbidity Monitoring	Moderate/Busy	8 hour days- 5 days/wk (9:00-5:00)
January	Field/Office			8 hour days- 5 days/wk (9:00-5:00)
February	Field/Office	ISP, Riparian Tree Planting, Sudden Oak Death Monitoring, Turbidity Monitoring	Moderate/Busy	8 hour days- 5 days/wk (9:00-5:00)
Spring	<u>i</u>		.k	i
March	Field/Office	Nursery Work, Sudden Oak Death Monitoring, SRF, Cottonwood Collection/Cottonwood Planting, ISP	Moderate/Busy	8 hour days- 5 days/wk (9:00-5:00)
April	Field/Office	Nursery Work, Sudden Oak Death Monitoring, Education, Invasives Removal	Moderate/Busy	8 hour days- 5 days/wk (9:00-5:00)
May	Field/Office/ Classroom	Creek Days, Education Opportunities with Real Science and MEEP, GIS, outreach opportunities	Moderate/Busy	8 hour days- 5 days/wk (9:00-5:00)
Summer	i		<u>.</u>	<u>i</u>
June	Field/Office	Native grass collection/propagation*, Hoopa Fish Fair, WSP Spring Training, Estuary Dives	Moderate/Busy	8 hour days- 5 days/wk (9:00-5:00)
July	Field/Office	Native grass/brush seed collection, Willow Fence construction, GRCC projects, Nick's Interns, Roll on the Mattole, Summer Steelhead Dives, Nursery Work	Moderate/Busy	8 hour days- 5 days/wk (9:00-5:00)

Service Year 18 - 2011/12

Watershed Stewards Project

August	Field/Office	Seedling Survival	Moderate/Busy	8 hour davs-	
3		Surveys, Estuary Dives,	,	5 days/wk (9:00-5:00)	
		Channel Monitoring,			
		GRCC projects, Nursery			
		Work			

Fall				
September	Field / Office / Classroom	Native Brush Collection, Channel Monitoring, Seedling Survival Surveys, WSP Summer Training, Estuary Dives	Moderate/ Busy	8 hour days – 5 days/wk (M-F 8:00- 4:30)
October	Field/ Office/ Classroom	Real Science, Channel Monitoring, Spawner Surveys, Native Seed Collection, GIS	Moderate/Busy	8 hour days – 5 days/wk (M-F 8:00- 4:30)
November	Field/Office	Sediment Surveys, GIS, Education, Fuels Reduction, Native Grass Planting	Moderate/Busy	8 hour days – 5 days/wk (M-F 8:00- 4:30)

*There are some site duties that the MRC expects assistance with, particularly certain field work tasks. Individual projects, office, outreach and education opportunities vary from year to year based on member experience and interest. There is a lot of flexibility in the form and content of your schedule. A clear idea of interests, self motivation and willingness to jump into projects are necessary for this site.



Page 6



Description of Site Duties

Riparian Planting Riparian planting helps restore key riparian areas on the mainstem Mattole and its tributaries. When tree species mature they will stabilize banks, plus provide shade and eventually large wood recruitment. The MRC uses a variety of native trees, brush, and grass species to provide erosion control and habitat.

Seedling Survival Surveys This project monitors the effectiveness of tree planting. Plots, GPS coordinates and photo points are set up in the riparian zone prior to planting. After the plot is planted, the trees that fall within a 1/100th acre (11.8 ft) radius are documented.

Invasive Plant Removal The Mattole has several noxious and invasive weeds including Scotch and French Broom, Tansy Ragwort, Star Thistle, Japanese Knotweed, Pampas grass and English Ivy. Most of the removal is mechanical pulling of invasive plants. Other options, like using prescribed burns to control invasives, are being explored by the MRC.

Fuels Reduction

The Mattole Watershed has an extremely high fuel load. Fuels reduction projects take place both along major roads and on private land owner's property. Fuels reduction crews have sawyers (people limbing and cutting down small overcrowded trees with chainsaws) and swampers (people dragging downed limbs to burn piles and burning them). Unless you have prior chainsaw experience, fuels reduction work will be piling and burning slash. Fuels reduction work takes place during the rainy months in fall, winter, and spring.

Sudden Oak Death Monitoring Sudden Oak Death pathogen *Phytophthora ramorum* is a concern for many California ecosystems. No Sudden Oak Death has been found in the watershed, however, it is found in areas adjacent to the watershed. Early detection is important, so the MRC, with the support of UC Cooperative Extension in Davis, has been taking samples from bay trees in areas where these waterborne oomycetes might have entered the watershed. Leaf traps with rhododendron leaves are also set out on the mainstem Mattole and several tributaries to detect Phytophtora in any of those watersheds.

Native Grass/Tree Seed Collection Establishing native vegetation is a part of many restoration projects at the MRC. The MRC strives to use native Mattole seeds for restoration projects. During the late spring, summer, and early fall crews go out to collect bunchgrass and other native plant seeds in the Mattole Valley.

Nursery Work

The MRC has a native plant nursery. Duties here include propagating native grass, shrub and tree species, weeding, constructing seed balls for broadcast seeding and drying and processing seeds for storage.

Nick's Interns

During the summer, the MRC hires several high school age interns to work on various projects. There is an opportunity to lead activities with the interns.

Channel Monitoring Permanent cross-sections have been set up in several tributaries to monitor sediment and stream bed morphology in the watershed. This project entails going out to these established benchmarks and collecting data.

GRCC

The Good Roads Clear Creeks program of the MRC addresses many of the upslope sediment sources in the watershed by doing everything from large projects like replacing culverts that would otherwise wash out delivering cubic tons of sediment to the Mattole, putting in willow baffles, to smaller manipulation of stream beds to take pressure off eroding banks and constructing willow fences. Throughout the summer







months there are opportunities to work with GRCC on various projects.

Newsletter The MRC puts out a biannual newsletter that you can assist with through writing

articles and helping with the layout.

Grant Writing There are opportunities in the MRC resource center to get grant writing experience

with the MRC. Please remember that WSP members are not permitted to contribute to

grant proposals submitted to federal agencies.

G/S The MRC has an extensive GIS program. Currently staff members are working on

setting up geo-databases to manage and map data. There are opportunities to learn the basics and expand on any previous knowledge to take on larger mapping tasks.

ISPs and Outreach Events

ISP Information

Past Individual Service Projects Year 13 Member Jen Hayes. Douglas Fir Planting in various locations with left over trees from the planting season. Local volunteers and seasoned tree planters all had a great time. The MRC used to be mostly a volunteer organization, so people were happy to do it again.

Year 13 Member Mike Gordon: Emergency willow mat weaving in the Mattole Estuary. Willow was cut from nearby sources and woven with biodegradable twine to provide shade and cover. This project created temporary refugia for Chinook juveniles as temperatures in the Mattole estuary reached lethal levels. Attendees from the 2007 Coho Confab, which was held in the Petrolia, and local community members volunteered for the project.

Year 14 Members Jen Hayes and Monica Scholey: Native Plant Restoration and Interpretation at Whitethorn School. Student volunteers planted six species of native shrubs and one species of native grass, mulched and drip irrigated from a wastewater tank on the school property at Whitethorn School. The students then made interpretive signs about each plant species. The project was part of a larger water conservation project at Whitethorn School.

Year 15 Member Lindsey Baris and David Bloch: Pull and plant along a riparian zone along the Mattole River. Left over trees were planted in an area that provided very little cover for the river. Areas invaded by French Broom was pulled and then planted with trees as well. A great crew of dedicated volunteers and out-of-town school kids came to help and learn about the Mattole Valley.

Year 16 Members Nora Talkington and Vimal Golding: High School students from Marin Academy and Triple Junction joined Petrolia community members for a very rainy day of bunchgrass planting at the in-situ grass nursery on Prosper Ridge. Volunteers gathered at the MRC nursery before the event to take a tour, transplant seedlings, and munch on goat cheese.

Outreach Information

MRC Resource Center

The MRC resource center is the main outreach department. There are opportunities

Service Year 18 – 2011/12

throughout the year to help the resource center employees with community outreach projects.

Lower Mattole Fire Safe Council and other Board Meetings In the past AmeriCorps members have served as the secretary for the Lower Mattole Fire Safe Council. Taking notes at these meetings provides insight into the fire ecology and fire safe issues in the Mattole, as well as community needs and how they can be addressed. It also provides a valuable service to the Fire Safe Council and the Mattole Valley. Other organizations sometimes need someone to take notes.

Volunteering at meetings gives you a chance to learn about restoration projects going on in the valley and the sentiments of the local community.

Calendar of Outreach Events for Site / Community

Summer Steelhead Summer steelhead population count held in July by the Mattole Salmon Group. Dives

Roll on the Mattole Honeydew Volunteer Fire Department Fundraiser held in July.

MRC Annual
Celebration

This is an annual fundraising and membership party. The restoration work of the MRC is celebrated with various events, dinner, and music. This year the event will

be held on November.

All Mattole Pot-Luck This is an event that takes place at the Mattole Grange in September or October.

There is a food contest of food made from all local sources.

Watershed Festival This is an event put on by Sanctuary Forest that takes place upriver in Whitethorn.

The Rye and Tide

This event is a race from the North Fork bridge to the beach. It involves switching

from running to biking at least 6 times with a partner. This event happens in

October.

Education

Education Notes

MEEP T

The Mattole Ecological Education Program offers environmental education to local students throughout the year. There are opportunities to accompany or design lessons for field trips and classroom visits. The contact person for MEEP is Moss.

(moss@mattole.org.)

Classrooms

In the Mattole, class sizes are small and often multi-aged. It is important to bring in a new perspective, and often new curriculum, because these students have probably had environmental education than most other school districts. At the same time, the level of understanding that these students can bring to the classroom allows you to take Real Science and other lessons to new and innovative levels.

This year, we taught the Real Science curriculum in Ferndale Elementary School. Overall, the students were enthusiastic and interested.

Site / Region Specific Education Resources

Schools in the Mattole Elementary/Middle School, Triple Junction High School, Mattole Valley

P.O. Box 160 • Petrolia, CA 95558 (707) 629-3514 Fax: (707) 629-3577

mrc@mattole.org



Watershed

Charter, Honeydew Elementary and Honeydew Home-school (both held at the same location), Whitethorn Elementary School and Whale Gulch Elementary/Middle School.

Local Ecology

Descriptions of Local Ecology

The River and Watershed

The mainstem of the Mattole is approximately 65 miles (100 km) long, and drains a watershed area of approximately 304 square miles, fed by over 74 tributary streams. The river and its tributaries provide important habitat for three salmonid fish species: steelhead trout, coho (silver) salmon, and Chinook (king) salmon.

River systems are dynamic - they are the link between erosion of upslope lands, the creation of alluvial floodplains, transport of eroded materials to the ocean, and habitats for aquatic organisms. Rivers inherently transport sediment, much of which will eventually turn into beach sand. It is this sediment that plays an important role in determining the geomorphology of the river (i.e., its shape, response to flooding, sinuosity, and habitat characteristics).

The Mattole River, in this extremely geologically active and unstable watershed, is choked with sediment, which reduces its capacity to support fish and other aquatic organisms. Before wide-scale timber harvesting, erosion happened slowly over thousands of years, and the river could transport sediment at a rate roughly equal to the input of new sediment. From the 1940s to 1970s, intensive timber harvest and other land use changes created hundreds of miles of poorly built (and later abandoned) roads, and hillsides denuded of the vegetation holding the soil in place. Combined with the floods of 1955 and 1964, many deep pools that used to exist in the river filled in, and the river channel became flatter and wider.

These changes have redefined the geomorphology of the river, and there is little we can do to bring the river back to its narrower and deeper conditions other than to help prevent sediment inputs and wait for the river to flush itself out. In response, the Council initiated the <u>Good Roads, Clear Creeks Program</u> in 2001 to assist landowners with sediment reduction. Based on the recommendations in the Council's 1989 report "Elements of Recovery," our primary strategy for assisting the river in returning to its pre-timber harvest condition.

The Forests

The Mattole River watershed is largely a forested landscape, with several different forest ecotypes present: redwood, Douglas fir, mixed hardwood, oak woodlands, Sitka spruce, tan oak, and mixed conifers.

Some of the dominant hardwood trees include California Buckeye (Aesculus californica), Oregon White Oak (Quercus garryana), several Live Oaks (Quercus spp.), Pepperwood (Umbellularia californica), Tanoak (Lithocarpus densiflorus), Madrone (Arbutus menziesii), and, in riparian areas, Red Alder (Alnus rubra), Oregon Ash (Fraxinus latifolia), Elderberry (Sambucus spp.), Bigleaf Maple (Acer macrophyllum), Vine Maple (Acer circinatum), Dogwood (Cornus spp.), and several species of Willow (Salix spp.).

TAN OAK



While the forests of the Mattole are diverse, three species stand out in the economic history of the place. The first of these is the tan oak, whose bark was harvested in the late 19th century for its high tannin content. Tannic acid was necessary in the process of leather making. Most, if not all, of the harvested material was taken out by ship from the mouth of the river near Petrolia.

RIPARIAN FORESTS

Riparian forests, those that grow along creeks and the river, are important to fisheries and riverine health as well. A healthy riparian canopy shades the watercourse and maintains cool water temperatures. In many coastal rivers, summertime water temperatures approach levels high enough to be lethal to salmonid fishes. Riparian zones act as a "buffer" between upslope lands and the river. This can work to prevent excessive nutrients and sediment from entering watercourses. Riparian vegetation also "armors" stream banks so that they can withstand high stream flows lessening the chance of eroding the banks. Fallen riparian vegetation (particularly the larger and more rot-resistant conifers) also contribute large woody debris to the river, which is important in the creation of complex habitats preferred by young salmonids.

CONIFERS

In the Pacific Northwest of the 20th century, particularly in the post-World War II construction boom, harvest of redwood and Douglas fir has become economically important. Douglas fir is the dominant forest species in the Mattole watershed. Prior to World War II, the technology did not exist to make harvesting and transporting of logs out of the extremely steep and rugged country of the Mattole profitable. After the war, two conditions were in place to make logging of Douglas fir in the Mattole a reality: a standing-timber tax that made it economically difficult for private landowners NOT to cut trees, and the tank tread technology and heavy equipment needed to make roads and transport logs out.

From the time of the migration of Eastern settlers to the watershed, land in the Mattole was held in large tracts primarily for ranching and orchard agriculture. The standing-timber tax forced much of the ranching community to either log their land or lose it. In 1957, Humboldt County had more sawmills than any other county in the United States. So many logs were being transported out of the Mattole that log truck drivers had to time their trips to the mill as to avoid congestion on the small roads. In the 1980s, most of the original forest had been entered for harvest, and very little ancient forest remained.



In 1988, the Mattole Restoration Council created a map depicting the ancient forest cover in 1942 and in 1988. To the left is a graphic depicting old growth forests as of 1997, which shows that of the total Mattole forestlands, only about 9% remain as ancient forest. That percentage has since dropped to less than 8%. The

MRC is actively engaged in efforts to preserve remaining old growth forests.

The Grasslands

Before Europeans arrived in California, grasslands looked very different than they do today. Perennial bunch grasses dominated grassland ecosystems. Bunch grasses can live up to 100 years, and are adapted to semi-arid summer conditions and geology that is unique to California ecosystems. Each year new shoots are formed out of a common fibrous root system. These bunch grasses, with their large and well-



developed root systems, are excellent at holding soil on to hillsides.

Perennial grass species exist in patches in the Mattole, but have been largely supplanted by introduced annual grasses from Europe and Asia. Annual grasses complete their life cycle in one year. In the Mattole, this generally means winter and spring vegetative growth, followed by seed production in early summer. Annuals are essentially dormant through the driest parts of the late summer and fall. Because they die and dry up in the fall, annual grasslands pose a higher fire risk than perennial grasslands.

Research suggests that grasslands historically covered around 25% of the Mattole watershed. These grasslands are important economically, particularly for cattle and sheep ranching, and other agricultural operations.

All information available on the MRC website at: http://www.mattole.org/watershed/index.htm.

Housing and Local Resources

Housing Contact List

Housing is often difficult to come by, but eventually something always turns up. Be sure to contact your mentor(s) prior to relocating to Petrolia for assistance with finding a rental, since most things are done in this community via word of mouth.

Connect to the Mattole Valley Bulletin Board on google groups. This is a great way to let the community know you are looking for housing, a ride into town, or anything that you need that others might have or to offer help yourself. It is the main means of advertising events in the valley.

Also, look at the hard copy of the Neighborhood Emergency Service Teams (NEST) List in the MRC Petrolia office. This list serves as the local phone book.

Local Resource Contacts

Jen Hayes *WSP Member Years 13 and 14

Monica Scholey *WSP Member Years 13 and 14

Lindsey Baris *WSP Member Year 15

Matt Hannington *WSP Member Year 15 ant 16

Trevor Griffiths *WSP Member Year 17

^{*}contact information is available through WSP, and you are welcome to call or e-mail with any questions.



Community Information

Map of Area

The Mattole Watershed



For a map of Petrolia go to: http://www.mapquest.com/maps?city=Petrolia&state=CA



Community Demographics

Population

Petrolia is a rural town with a population around 450 people. There is a tight-knit community and lots of community activities. Go to saunas on Sunday nights in cold season months or play volleyball in the elementary school gym. People are generally friendly and welcoming. There are lots of opportunities to learn about homesteading, gardening, water conservation, natural building etc.

Community Services

There are dance, yoga, and martial arts classes offered at the Petrolia Community Center.

Local eggs are available from a few different sources – one being on Tuesdays after Yoga, at the community center.

Local milk may also be available.

Entertainment and Community Events

Resources for Affordable Entertainment Options

Hiking

Most of the land in the watershed is privately owned and, therefore off limits, except through invitation by the land owner. However the BLM King Range Conservation Area covers 68,000 acres along the coastal range of the watershed. The mouth of the Mattole River is located at the northern end of the Lost Coast Trail, which travels south along the coast 64 miles to Usal Creek in Mendocino. There are also shorter hikes in the King Range including a 3 mile hike up to the highest point in the King Range, King Peak.

Visit the BLM website for more information:

http://www.blm.gov/ca/st/en/fo/arcata/kingrange/index.html.

Camping

There are several campgrounds in the watershed including one at the Mattole Beach, A W Way County Park, Mattole Camp, and Honeydew Campground.

There are many good swimming holes in the Mattole to enjoy during hot spring and summer months.

Entertainment

Cabaret at the Petrolia Community Center happens once every three months or so.

Look on the Google groups community bulletin board, this will display the times of pancake breakfasts at the Mattole Grange, dates for Cabaret, farmer's markets, music and other events.

Weekly basketball and volleyball games are usually held at the Mattole Elementary School. Contact one of the Petrolia WSP members for times.

Recurring Event List

Wednesday breakfast and dinner cafes are held semi-regularly at the Mattole Community Center.

Service Year 18 - 2011/12

Cabaret happens about four times a year and is an experience not to be missed. Perform a skit, tell a joke or play some music and become a part of the magic.

Pancake breakfast is held once a month at the Mattole grange. All you can eat Krusteaz, eggs, sausage or ham!

Farmer's markets happen once a week during the summer.

The Yellow Rose re-opened in 2008. The bar is open most days of the week and has a pool table.

Helpful Hints

Lost Inn: 629-3394 (good for one up to a family)

Attachments

Contact Lists

Mattole Restoration Council: 707-629-35141

Ed Logs & Information

AmeriCorps Watershed Stewards Project Real Science Education Log			
	Member Name(s)	Lindsey Baris and David Bloch	
	Dates of Real Science Visits mm/dd/yyyy to mm/dd/yyyy	3/10/09-4/21/2009	
Section 1: Basic	School Name	Ferndale Elemenary	
Education	Teacher Name	Heather Boynton /Jennifer Fisk-Becker	
Info. Required	Teacher Contact Info (Email, Phone, Address) Please indicate the best way to reach this teacher	707-786-5300 tigger@northcoast.com/ fiskbecker@suddenlink.net (email works best)	
	Grade Level	2nd/ 5 th	





	Was teaching this class a	
	positive experience?	
	If not, please include a note about	
	the issues.	
	(i.e the school uses WSP for	yes, very
	consecutive years and the	
	students already know our	
	curriculum, teacher is difficult to	
	work with, etc.)	
	Please include the lessons that y	ou taught plus any information that will be helpful to next
	year's members-	
	(i.e. this school is extremely sens	sitive about ranching issues, this teacher really likes the
	macro-invertebrate lesson, this to	eacher is hands on/hands off, etc.)
	Week 1: watersheds - activities: In	troductions, crumpled up paper watershed model, watershed
	worksheets on overhead projection.	
	Wook 2: water cycle - activities: wa	atercycle bracelets, the incredible journey, watershed
	worksheets & vocab	diercycle bracelets, the incredible journey, watershed
	Worksheets & Vocab	
Section 2:		
Narrative		
Required	Week 3: salmon life cycle - activiti	es: lifecycle pageant, rock, paper, scissors game, power point
	Week 4: salmon anatomy - activitie	es - fish dissection (kids loved this)
		(,
	Week 5: salmon habitat - activities	s - Fred the fish & Salmon, bear, mosquito
		noked salmon tasting The teachers were very hands off,
		that we didn't really need their help. Overall, the kids seemed
	to heave a great time. Obviously th	e more hands-on you can make it, the better.



Ed Tally Sheet

Pre/Post Watershed Knowledge Test Summary Sheet - Test A & B

WSP Members: Lindsey Baris & David Bloch

School and

Grade Level(s): Ferndale Elementary - 5th Grade

Teacher(s): Jennifer Fisk-Becker

Check Test A ☐ Test A ☐ Test B

Given:

Student name	# correct pre-test	pre-test score	# correct post-test	post-test score	% improvement
Mauro	5	50	8	80	60
Tierra	5	50	8	80	60
Kendall	5	50	9	90	80
Mason	3	30	8	80	167
Jacey	8	80	10	100	25
Clayton	7	70	9	90	29
Dane	7	70	10	100	43
Lee	6	60	9	90	50
Grant	7	70	9	90	29
Enrique	4	40	10	100	150
Sarah	5	50	10	100	100
Spencer	6	60	10	100	67
Lane	5	50	10	100	100
Hunter	6	60	7	70	17
Victoria	6	60	8	80	33
Emma	6	60	9	90	50
Coleman	6	60	8	80	33
Owen	6	60	10	100	67
Taylor	6	60	10	100	67
Kalynn	7	70	10	100	43
Cameron	5	50	8	80	60
Allison	8	80	10	100	25
Andrew	4	40	9	90	125
Cassidy	5	50	10	100	100
Carson	2	20	8	80	300
Thomas	did not take	#VALUE!	10	100	#VALUE!

students greater than 20% improvement

24

% students improved greater than 20%

96



Pre - Test Results

# Students Who Scored B/T 0-25%	1
# Students Who Scored B/T 26-50%	9
# Students Who Scored B/T 51-75%	11
# Students Who Scored B/T 76-100%	2

Post- Test Results

# Students Who Scored B/T 20-40%	0
# Students Who Scored B/T 41-60%	0
# Students Who Scored B/T 61-80%	8
# Students Who Scored B/T 81-100%	18

Outreach Summaries & Information

Site Protocols & Information

Site Forms

MRC Petrolia Handbook



Service Year 18 - 2011/12